

Turner, *Chrysothamnus nauseosus* (Pallas) Britton (Rabbitbrush, Asteraceae) (1); Hell's Gate State Park, 6.4 km (4 mi) E of Lewiston, 14 Jul 1982, T. D. Miller, *Cirsium arvense* (L.) Scopoli (Canada thistle, Asteraceae) (1); same loc., but 28 Jul 1982, J. B. Johnson, sweeping low vegetation, (1); same, but 14 Jul 1983, *Melilotus alba* Desrousseaux flowers (white sweet clover, Fabaceae) (2); same, but 22 Aug/6 Sep 1984, T. D. Miller, yellow pan trap (3); same, but 10/20 Aug 1985 (2). OWYHEE Co.: Murphy, 18 Jul 1982, J. B. Johnson, sweeping low vegetation (1). TWIN FALLS Co.: Hollister, 21 Aug 1930 (holotype). WASHINGTON. BENTON Co.: 8 km (5 mi) N of Richmond, 2 Oct 1982, J. B. Johnson, sweeping low vegetation (1). GRANT Co.: Burke, 9 Aug 1950, E. Klostermeyer, sweeping *Salsola kali* L. (Russian thistle, Chenopodiaceae). KITTITAS Co.: Whiskey Dick Cyn, 12.8 km (8 mi) N of Vantage.

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### Scientific Note

## NEW RECORDS OF *TRICHOSTERESIS* FOERSTER FROM THE WESTERN UNITED STATES (HYMENOPTERA: MEGASPILIDAE)

Only two species of *Trichosteresis* Foerster are recorded from North America—*T. floridana* Ashmead from Jacksonville, Florida, and *T. vitripennis* Whittaker from Chilliwack, British Columbia (Muesebeck, C. F. W. 1979. Catalog of Hymenoptera of North America: 1191). Their hosts are not known, but European species have been reared from syrphid pupae. However Dessart (Dessart, P. 1974. Ann. Soc. Entomol. Fr., (N.S.) 10:395–448) believes *Trichosteresis* is monotypic, and all other species, are synonyms of *T. glabra* (Boheman).

In 1993, I found *T. vitripennis* in two widely-separated locations in California, suggesting that it occurs throughout the state. In April, I collected a female on the roof of my car that had just come through a car wash in the City of San Bernardino (see records). In June, I swept two females from the foliage of *Quercus agrifolia* Nee near the North Oakland Sports Center in Oakland. Determinations were made using a generic key to world Ceraphronoidea (Alekseyev, V. N. 1978. Entom. Rev., 57: 449–453) and the species description (Whittaker, O. 1930. Proc. Entom. Soc. Wash., 32: 72–73); no comparisons with the types were made. These discoveries caused me to reexamine the material in the Essig Museum, where I found four additional *Trichosteresis* specimens. One was a *T. vitripennis* female, which I had swept from *Medicago sativa* L. at U.C. Berkeley's experiment station in Albany. The other three were females that did not match the descriptions of either *T. floridana* or *T. vitripennis*; these were collected at the Needle Rocks at the north end of Pyramid Lake, Nevada (collector unknown).

*Trichosteresis* is easily distinguished from other megaspilids by its forewing characteristics (lacking a marginal fringe and the disc mostly bare or with microscopic hairs). The three species from North America also have the radial vein shorter than the breadth of the pterostigma. The mesonotum of *T. vitripennis* has a complete and deeply impressed longitudinal median line, and two anterior longitudinal furrows between the median line and notauli; in *T. floridanus* the median line is incomplete posteriorly and the two longitudinal furrows absent. The species from Nevada closely resembles *T. vitripennis*, but its first funicular segment is about the same length as the pedicel; in *T. vitripennis*, this segment is 1.5–2 times longer than the pedicel.

All seven specimens are deposited in the collection at the Laboratory of Biological Control in Albany, part of the Essig Museum at the University of California at Berkeley.

*Records.* — *Trichosteresis vitripennis*: CALIFORNIA. ALAMEDA Co.: Oakland, 3 and 10 Jun 1993, R. Zuparko, *Quercus agrifolia* Nee, 2 females; Albany, 3 Oct 1992, R. Zuparko, *Medicago sativa* L., 1 female. SAN BERNARDINO Co.: San Bernardino, 12 Apr 1993, R. Zuparko, 1 female.

*Trichosteresis* sp.: NEVADA. WASHOE Co.: Needle Rocks at N end of Pyramid Lake, 15 Sep 1983.

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## Scientific Note

### INITIATION OF MATING ACTIVITY AT THE TREE CANOPY LEVEL AMONG OVERWINTERING MONARCH BUTTERFLIES IN CALIFORNIA

Overwintering monarch butterflies, *Danaus plexippus* (L.) (Danaiidae, Lepidoptera) congregate west of the Rocky Mountains in clusters, ranging from a few hundred to several thousand individuals, in certain groves along the California coastline. This aggregation behavior, the result of migration to escape the rigors of winter, is believed to lessen bird predation (Fadem, C. M. & A. Shapiro. 1979. Pan-Pacif Entomol., 55: 309–310) and concentrates the sexes in a locale that increases their chances of mating in the spring. Mating activity at a wintering grove may occur sporadically throughout the winter, but begins in earnest by early or mid-February and lasts approximately two weeks. Females usually mate with several males before their spring dispersal to oviposition sites (Hill, H. F., A. M. Wenner & P. H. Wells. 1976. Amer. Mid. Nat., 95: 10–19). The males capture females in flight (Hill et al. 1976) or “nudge” them toward the ground (Pliske, T. E. 1975. Ann. Ent. Soc. Amer., 68: 143–151) before mating. Similar behavior has been observed in the laboratory (Rothschild, M. 1978. Antenna, 2: 38–39) and in summer populations (Zalucki, M. P. 1982. J. Aust. Ent. Soc., 21: 241–246).